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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/745,215	12/21/2000	John William Richardson	PU000157	8037

24498 7590 06/15/2005

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EXAMINER	
SEFCHECK, GREGORY B	
ART UNIT	**PAPER NUMBER**
2662	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/745,215	RICHARDSON ET AL.	
	Examiner	Art Unit	
	Gregory B. Sefcheck	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

- Applicant's Amendment filed 4/14/2005 is acknowledged.
- Claims 1 and 13 have been amended.
- Claims 1-19 remain pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-11, 13-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voit in view of Chaddha (US006392705B1).

- In regards to Claims 1-6, 8, 9, 11, 13, 15, 16, and 18,

Voit discloses managing video traffic for remote terminal DSLAMs in an ATM network (Title; Col. 2, lines 35-38; claim 1,9,13 – method/network for delivering video over a DSL path in an ATM network).

Referring to Fig. 1, Voit discloses an ATU-R 23 and PC 25 at each subscriber location, a DSLAM coupled to the subscriber, an ATM switch coupled between the DSLAM and an ISP that can provide a video signal (claim 13 – CPE coupled to subscriber's communication device; claim 13 – DSLAM coupled to CPE; claim 13 –

ATM network coupled between DSLAM and video source; claim 15 – desktop system and set-top box with decoder coupled to a video display).

Voit shows that a video signal may be transmitted through the ATM network to ATM switch 19, to the DSLAM and then through to the subscriber equipment (claim 6 – transmitting video over DSL path; claim 8 – receiving done by CPE).

Though Voit discloses regulating the delivery of video to subscribers based on a subscriber's grade of service, Voit does not explicitly disclose controlling the DSLAM to deliver selective ones of sub-signals of video layers that contribute to a video signal's resolution according to a level of importance of the layers and the bandwidth available as recited in claims 1 and 13. Voit does not explicitly show the correlation between the selection of the video layer sub-signals based on the data rate capacity of the DSL path, as recited in claims 2 and 3. Voit also does not explicitly show sub-signals of video layers that contribute to a video signal's resolution as recited in claims 4, 5 and 13.

Chaddha discloses a multimedia compression system. Referring to Fig. 5, Chaddha shows that a network delivery sender 5' transmits various resolution layers L1-L4 (base and enhancement) of a multimedia data signal to a receiver 7'. Chaddha discloses that the receiver 7' is aware of the bandwidth capabilities and desires of one or more ultimate recipients of the data, such that, to a recipient, the receiver 7' sends as many layers, in order of importance, as the recipient's bandwidth allows (Col. 11, lines 31-40; claim 1 – separating video signal into multiple sub-signals; claim 1,13,16,18 – deliver selective sub-signals to subscribers based on level of importance and available bandwidth; claim 2 – selecting sub-signals based on data rate capacity of DSL path;

claim 3 – bandwidth of sub-signals is supported by the data rate of the DSL path; claim 4,5,13 – video made up of multiple layers contributing to a resolution; claim 11 – bandwidth of sub-signals is smaller than video signal).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enable the method and network of Voit to selectively deliver video layer signals of a video signal to subscribers, as taught by Chaddha. This modification would enable enhanced video reception for DSL subscribers that have the needed bandwidth available while enabling a minimum quality of signal to subscribers without the necessary bandwidth to receive the video signal at full resolution.

- In regards to Claim 7,

Voit in view of Chaddha discloses video delivery over a network that covers all limitations of the parent claim.

Both Voit and Chaddha disclose the use of a server for providing the video to the subscriber (Voit – Col. 6, lines 3-10; Chaddha – Col. 2-3, lines 56-8; claim 7 – separating video signal for transmission to subscriber is done by a video server).

- In regards to Claims 10 and 14,

Voit in view of Chaddha discloses video delivery over a network that covers all limitations of the parent claim.

Voit discloses the use of multiple independent ATM virtual circuits for transmitting video signals (Abstract; claim 10 – spanning sub-signals across multiple ATM virtual

circuits; claim 14 – multiple video layers occupy multiple and independent ATM virtual circuits).

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Voit in view of Chadda as applied to claim 1 above, and further in view of Fadavi-Ardekani et al. (US006707822B1), hereafter Fadavi.

- In regards to Claim 12,

Voit v. Chaddha discloses video delivery over a network that covers all limitations of the parent claim.

Neither Voit nor Chaddha explicitly disclose adding redundancy or error control coding to each video sub-signal for use in decoding upon reception.

Fadavi discloses a multi-session DSL apparatus and method through an ATM network interface (Title; Abstract). Fadavi discloses appending a cyclic redundancy check and forward error correction to frame data at the DSLAM of a central office in a typical ADSL system. These additions to the payload suppress decoding errors upon reception of the data signal (Col. 2, lines 13-47; claim 12 – adding redundancy or error control coding to each sub-signal for decoding).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the method and network of Voit by providing redundancy and/or error control coding to the video signals, as shown by Fadavi. Addition of these overhead bytes to the payload prevent errors during transmission to the subscriber.

4. Claims 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voit in view of Chaddha as applied to claim 13 above, and further in view of Cooperman et al. (US006768777B1), hereafter Cooperman.

- In regards to Claims 17 and 19,

Voit v. Chaddha discloses video delivery over a network that covers all limitations of the parent claim.

Neither Voit nor Chaddha explicitly disclose the available bandwidth of the DSL path is determined by the wiring length from the DSLAM to the subscriber equipment, where the bandwidth, and therefore delivered video layers, increases as the path length decreases.

Cooperman discloses a method and apparatus for high speed DSL (title). Cooper discloses that the loss of bandwidth increases with line length when applying DSL technology (Col. 1, lines 57-67; claim 17 – available bandwidth of DSL path is determined by wiring length form the DSLAM to the CPE; claim 19 – more layers can be delivered over the DSL path as the path decreases in length).

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the method and network of Voit by accounting for the bandwidth fluctuations in DSL paths as the length of the path changes, as shown by Cooperman, because the quality of the video delivered to subscribers depends upon the bandwidth of the DSL path from the DSLAM to the subscriber's equipment.

Response to Arguments

5. Applicant's arguments filed 4/14/2005 have been fully considered but they are not persuasive.

- In the Remarks on pg. 6 of the Amendment, the Applicant contends that the combination of Voit and Chaddha does not disclose or suggest combinable sub-signals having different levels of image detail such that a greater number of sub-signals being combined provides higher image resolution transmitted independently over ATM paths and that the sub-signals are selected according to the level of importance according to a bandwidth suitable for subsequent reception over a DSL path as set forth in claims 1 and 13.
- The Examiner respectfully disagrees. As shown in the rejection above, Fig. 5 of Chaddha shows video is divided into Layers L1-L4. Lines 11-20 of column 11 in Chaddah, these "layered" signals are disclosed as being additive, with a base layer and several enhancement layers, such that adding enhancement layers to the base layer provides higher image resolution. Lines 5-10 and 31-40 of column 11 in Chaddha also show that each layered "sub-signal" is transmitted independently in channels C1-C4. It is the opinion of the Examiner that this disclosure of Chaddha, when combined with Voit for transmission to subscribers over an ATM/DSL system, meets all the limitations of Applicant's claims 1 and 13.

Conclusion

6. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory B. Sefcheck whose telephone number is 571-272-3098. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GBS
6-9-2005

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